

REMARKS

The present patent application still comprises forty-seven (47) claims, numbered 1 to 30, 50 to 55 and 59 to 69.

No amendment to the patent application has been made by this response. Claims 31 to 49 and 56 to 58 have been previously cancelled without prejudice.

On pages 2 to 34 of the Final Office Action, the Examiner rejects claims 1 to 30, 50 to 55 and 59 to 69 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,577,634 to Tsukakoshi *et al.* ("Tsukakoshi") in view of U.S. Patent No. 6,947,963 to Agarwal *et al.* ("Agarwal") and U.S. Patent No. 7,068,661 to Watt *et al.* ("Watt").

As discussed below, the Applicants respectfully traverse this rejection and submit that claims 1 to 30, 50 to 55 and 59 to 69 are allowable.

For ease of reference, excerpts of independent claims 1, 23 and 65 are presented below, with certain elements being emphasized:

1. A router supporting multiple routing protocols, said router comprising:
[...]
- c. a routing layer in communication with said interface layer, said routing layer including a plurality of routing protocol computing entities, each routing protocol computing entity being associated with a set of at least one routing protocol and including:
 - i. a CPU; and
 - ii. a data storage medium in communication with said CPU and storing program data for execution by said CPU to cause said routing protocol computing entity to effect **management of one or more peering sessions with remote routing devices according to the at least one routing protocol** in the set associated with said routing protocol computing entity, said management of one or more peering sessions comprising maintaining in said data storage medium information on a plurality of routes;
wherein the set of at least one routing protocol associated with a first one of said routing protocol computing entities is different from the set of at least one routing protocol associated with a second one of said routing protocol computing entities;
wherein the data storage medium of said first one of said routing protocol computing entities contains information on at least one route

for which there is no information in the data storage medium of said second one of said routing protocol computing entities.

23. A router, comprising:

[...]

c. a routing layer in communication with said interface layer, said routing layer including a plurality of routing protocol computing entities, each routing protocol computing entity being associated with a routing protocol and including:

i. a CPU; and

ii. a data storage medium in communication with said CPU and storing program data for execution by said CPU to cause said routing protocol computing entity to effect **management of one or more peering sessions with remote routing devices according to the routing protocol** associated with said routing protocol computing entity, said management of one or more peering sessions comprising maintaining in said data storage medium information on a plurality of routes;

wherein the routing protocol associated with a first one of said routing protocol computing entities is the same as the routing protocol associated with a second one of said routing protocol computing entities;

wherein the data storage medium of said first one of said routing protocol computing entities contains information on at least one route for which there is no information in the data storage medium of said second one of said routing protocol computing entities.

65. A router comprising:

[...]

c. a routing layer in communication with said interface layer, said routing layer including a plurality of routing protocol computing entities, each routing protocol computing entity being associated with a set of at least one routing protocol and including:

i. a CPU; and

ii. a data storage medium in communication with said CPU and storing program data for execution by said CPU to cause said routing protocol computing entity to effect **management of one or more peering sessions with remote routing devices according to the at least one routing protocol** in the set associated with said routing protocol computing entity, said management of one or more peering sessions comprising maintaining in said data storage medium information on a plurality of routes;

wherein the data storage medium of a first one of said routing protocol computing entities contains information on at least one route for which there is no information in data storage medium of a second one of said routing protocol computing entities;

[...]

It is respectfully submitted that Tsukakoshi, Agarwal and Watt, whether taken separately or in combination, do not teach or suggest a router comprising a plurality of routing protocol computing entities each including a CPU and a data storage medium and each operative to effect management of one or more peering sessions with remote routing devices according to a set of at least one routing protocol associated therewith, where the data storage medium of a first one of the routing protocol computing entities contains information on at least one route for which there is no information in the data storage medium of a second one of the routing protocol computing entities.

– Tsukakoshi –

As conceded by the Examiner on pages 4, 6, 9, 10, 14, 15 and 34 of the Final Office Action, Tsukakoshi neither teaches nor suggests the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity. Indeed, as shown on pages 26 and 27 of the response filed on September 13, 2006, Tsukakoshi's clustered router 11 is designed to ensure that all of its route calculation units 20 have the same routing information in their memory 42. In other words, there is *duplication* of network information 16 across all the route calculation units 20 and this duplication is an essential aspect that is required for correct operation of Tsukakoshi's clustered router 11. This entails that the routing information stored in the memory 42 in all of Tsukakoshi's route calculation units 20 contain information on identical sets of routes. Therefore, by requiring identical sets of routes across all the route calculation units 20, not only does it neither teach nor suggest the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity, Tsukakoshi actually *teaches away* from this claimed element.

– Agarwal –

Consistent with the Examiner's remarks on page 34 of the Final Office Action, Agarwal also fails to teach or suggest the claimed element whereby the data storage medium of a first

routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity. Indeed, as shown on pages 22 and 23 of the response filed on October 25, 2007, Agarwal's router includes control cards with processors requiring a full complement of routing data generated by a complement of routing protocols. More particularly, a central and essential aspect of Agarwal's router is that the routing database maintained by each processor is synchronized to contain route data from the full complement of routing protocols running on all processors. This entails that the routing databases, and thus the data storage media, in all of Agarwal's control cards contain information on identical sets of routes. Therefore, by requiring identical sets of routes across all its processors, not only does it neither teach nor suggest the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity, Agarwal actually *teaches away* from this claimed element.

– Watt –

The Examiner alleges on pages 6, 11 and 15 of the Final Office Action when referring to certain passages and figures of Watt (i.e., col. 6, lines 1 to 10 and 19 to 30; col. 7, lines 40 to 50; and Figures 2 and 3) that Watt discloses the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity. With respect, the Applicants disagree.

Watt (in general and in particular in the passages and figures referred to by the Examiner) describes that each of its router's "forwarding engines" 40-48 stores one or more "forwarding tables" containing route information specific to that forwarding engine. Watt's "forwarding engines" 40-48 are not at all equivalent to the claimed "routing protocol computing entities", which are operative to effect management of peering sessions with remote routing devices according to routing protocols associated therewith. Not only would ordinarily skilled persons distinguish between "forwarding engines" and "routing protocol computing entities", but Watt itself clearly distinguishes these by describing that "routers include one or more

route computation engines and one or more forwarding engines” and that the “route computation engine executes the routing protocols” (col. 1, lines 34 to 37). More particularly, Watt’s forwarding engines 40-48 do not manage peering sessions with remote routers according to routing protocols. Rather, it is Watt’s “route computation engine” 38 that manages peering sessions with external routers by exchanging messages with these external routers “for the purpose of router-router peer protocols”. The involvement of Watt’s forwarding engines 40-48 is limited to being a conduit through which may pass messages generated by or destined for the route computation engine 38 (col. 3, lines 2 to 6; col. 4, lines 41 to 44; and col. 5, lines 22 to 42).

Therefore, Watt’s forwarding engines 40-48 in no way correspond to the claimed “routing protocol computing entities”, and, as such, Watt’s disclosure of the forwarding engines 40-48 having specific forwarding tables in no way teaches or suggests the claimed element whereby that the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity.

In view of the above, it is clear that the Examiner’s combination of Tsukakoshi, Agarwal and Watt cannot support a finding of obviousness in respect of claims 1, 23 and 65, for at least the following reasons.

a) The cited references fail to teach or suggest all of the claimed elements

None of Tsukakoshi, Agarwal and Watt teaches or suggests the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity. In itself, this failure of the cited references to teach or suggest all of the claimed elements precludes a finding of obviousness in respect of claims 1, 23 and 65. On this basis alone, the Examiner is respectfully requested to withdraw the rejection of these claims.

b) *No apparent reason to modify the reference teachings has been provided*

With respect, the Examiner has failed to provide an apparent reason why an ordinarily skilled person looking at Watt would modify Tsukakoshi's clustered router 11 to arrive at the claimed router. Rather, the Examiner merely states that "[t]he motivation to provide unique route info in each forwarding table is to minimize redundancy and enhance processing speed". This fails to provide any kind of articulated reasoning of why an ordinarily skilled person would be prompted to modify Tsukakoshi's route calculation units 20 (which implement routing protocol means 15) on a basis of Watt's teachings of specific forwarding tables (which are part of Watt's forwarding engines 40-48 that do not manage peering sessions according to routing protocols) such that the memories 42 of different ones of Tsukakoshi's route calculation units 20 would contain information on different sets of routes. As noted by the Supreme Court¹, "[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness". Accordingly, in view of the lack of any articulated reasoning to modify Tsukakoshi's clustered router 11 to arrive at the claimed router, the Examiner is respectfully requested to withdraw the rejection of claims 1, 23 and 65.

c) *The cited references teach away from the claimed router*

Since Tsukakoshi and Agarwal both *teach away* from the claimed element whereby the data storage medium of a first routing protocol computing entity contains information on at least one route for which there is no information in the data storage medium of a second routing protocol computing entity, they cannot possibly be combined with any reference (including Watt) to arrive at the claimed router. That is, since Tsukakoshi requires identical sets of routes across all its route calculation units 20 for correct operation, an ordinarily skilled person would in no way be led in view of any reference (including Watt) to modify

¹ *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385 (2007), citing *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006).

Tsukakoshi's clustered router 11 such that the memories 42 of different ones of its route calculation units 20 would contain information on different sets of routes as this would render Tsukakoshi's clustered router 11 inoperable. Similarly, since Agarwal requires identical sets of routes across all its processors for correct operation, no ordinarily skilled person would be led in view of any reference (including Watt) to modify Agarwal's router such that different ones of its processors would contain information on different sets of routes as this would render Agarwal's router inoperable. Accordingly, as they *teach away* from the claimed router, Tsukakoshi and Agarwal cannot be used to support an obviousness rejection of claims 1, 23 and 65.

In light of the foregoing, it is respectfully submitted that: (1) Tsukakoshi, Agarwal and Watt fail to teach or suggest all the elements claimed in each of claims 1, 23 and 65; (2) the Examiner has failed to identify an apparent reason why an ordinarily skilled person would modify Tsukakoshi's clustered router in view of Watt's teachings to arrive at the claimed router; and (3) the claimed router can in no way be obvious in view of Tsukakoshi and Agarwal since each of these references *teaches away* from the claimed router. Therefore, it is respectfully submitted that the Examiner has failed to establish a case of obviousness in respect of claims 1, 23 and 65. The Examiner is thus respectfully requested to withdraw the rejection of claims 1, 23 and 65, which are believed to be allowable.

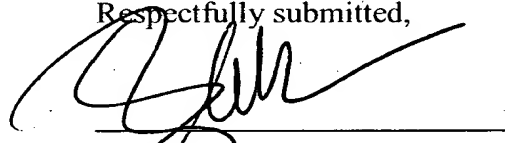
Each of claims 2 to 22, 24 to 30, 50 to 55, 59 to 64 and 66 to 69 depends on one of claims 1, 23 and 65 and thus incorporates by reference all the elements of that base claim. Hence, at least for the reasons set forth above in respect of claims 1, 23 and 65, the Applicants respectfully submit that claims 2 to 22, 24 to 30, 50 to 55, 59 to 64 and 66 to 69 are allowable and respectfully request the Examiner to withdraw the rejection of these claims.

CONCLUSION

The Applicants are of the view that claims 1 to 30, 50 to 55 and 59 to 69 are allowable. Favorable reconsideration is requested. Allowance of the present patent application is earnestly solicited.

If the present patent application is not considered to be in full condition for allowance, for any reason, the Applicants respectfully request the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims pursuant to MPEP 707.07(j) or in making constructive suggestions pursuant to MPEP 706.03 so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,



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